

**CONTEXT LOOK AHEAD STORAGE STRUCTURES****ABSTRACT OF THE DISCLOSURE**

5 A memory storage structure includes a memory storage device, and a first meta-structure having a first size and operating at a first speed. The first speed is faster than a second speed for storing meta-information based on information stored in a memory. A second meta-structure is hierarchically associated with the first meta-structure.

10 The second meta-structure has a second size larger than the first size and operates at the second speed such that faster and more accurate prefetching is provided by coaction of the first and second meta-structures. A method is provided to assemble the meta-information in the first meta-structure

15 and copy this information to the second meta-structure, and prefetching the stored information from the second meta-structure to the first meta-structure ahead of its use.